

Bullion Beck and Champion Mine, Headframe
Tintic Mining District
Eureka
Juab County
Utah

HAER No. UT-46

HAER
UTAH,
12-EUR,
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park Service
U. S. Department of the Interior
P. O. Box 25287
Denver, Colorado 80225

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HISTORIC AMERICAN ENGINEERING RECORD

Bullion Beck and Champion Mine, Headframe

HAER No. UT-46

Location: Tintic Mining District
Eureka, Juab County, Utah

SW 1/4, Section 13, Township 10 South, Range 2 West
Quad: Eureka, Utah (U.S.G.S. 7.5')

Dates of Construction: Primary construction of the mine began in 1871. The main mine construction was in 1890. Mine facilities and the headframe housing were dismantled in 1925. Mining ceased in 1960.

Present Owner: Sharon Steel Corporation

Present Use: Not in use; historic landmark only

Significance: Headframe is one of several four post gallows in the Tintic Mining District which is on the National Register of Historic Places.

Historian: John Semulis
Senco-Phenix
Salt Lake City, Utah

PART I. HISTORICAL INFORMATION

Mineral exploration has always been an important theme in the history of the United States. The Federal Government, as early as 1785, reserved one-third of the mineral resources on Federal land. This did not prove workable and was repealed in the early nineteenth century. The discovery of gold in 1848 at Sutter's Mill on the American River in California was one of the main events stimulating the development of a mineral industry in the United States. People flocked to California in hopes of making their fortunes. The surface gold, obtainable by placer mining, soon ran out, and deep mining, which required large amounts of capital, soon became dominant. The many prospectors drawn by the California Strike either became employees of the large mining companies or spread throughout the West in search of other major claims. Their efforts in the period from 1850 to 1875 located most of the major resources and set the stage for the development of the western mineral industry (Notarianni: 1982).

Utah's role in the mineral industry was slow to develop because of the opposition of Brigham Young and other Mormon leaders who did not want to open the state to outsiders (Arrington: 1963). Other causes that delayed development, specifically in the Tintic area, included a hostile Ute Indian presence under the leadership of Chief Tintic, for whom the area is named (Harris: 1961).

The true development of the mineral industry in Utah coincides with the development of the transcontinental railroad in 1869. In 1870, the Union Pacific Railroad, in need of coal for its operation, opened mines in Green River and Rock Springs, Wyoming, and in 1874 in Coalville, Utah. The Union Pacific Railroad, which generally followed the route of modern-day interstates 80 and 84 into Ogden, Utah, had easy access from its mines to the urban market of the Salt Lake Valley.

Without a competing railroad from other coal sources, this created an immediate monopoly on the coal supply for Salt Lake City, which persisted for a decade (Union Pacific Company: 1940).

In an attempt to break the coal monopoly held in Salt Lake City by the Union Pacific, the Denver and Rio Grande Western Railroad began a line from Denver to Salt Lake City. Originally scheduled to run through Castle Valley and Salina Canyon, the company revised the route of the railroad to take advantage of the coal resources of the Wasatch Plateau (Athearn: 1962).

The Utah Southern Railroad was organized by Mormon interests to connect Salt Lake City to Arizona. Following a pattern that had already been established, the railroad was constructed using Mormon labor. When completed, the stock was acquired by the Union Pacific (Arrington: 1958). The Union Pacific

reached the Tintic area in 1882 under the name Salt Lake and Western Railway. Rail service continued to develop, so that by 1892 the Tintic area was served by branches of both the Union Pacific and the Denver and Rio Grande Western railroads (Strack, "Railroads" in Notarianni: 1982).

The Tintic Mining District

The Tintic Mining District encompasses an approximately eight square mile area on the east and west slopes of the north-south-running East Tintic Mountain Range. The East Tintic Range is typical of the block-faulted ranges of the Great Basin. The Tintic District is within close proximity to the Wasatch Front valleys and major transportation arteries.

During the period of 1890 to 1926, the principal activity of the Tintic area was gold, silver and lead mining. The area was surveyed by the Utah Historical Society in the mid 1970s, and the Tintic Mining District was listed on the National Register of Historic Places in March 1979 (Notarianni: 1982).

The history of Tintic's prominent period has been divided into four phases (Notarianni: 1982). The first phase began in 1869 with the development of the Sunbeam claim. The development of the Dragon, Mammoth, Eureka Hill and Bullion Beck soon followed. The period was one of growth and development that witnessed the establishment of the mines and smelters. The small towns of Diamond, Mammoth, Silver City and Eureka began in close proximity to the mining centers (Notarianni: 1982). The period ends with the introduction of the railroad in 1878.

The second period, from 1879 to 1898, was one of industrialization and growth. The railroads brought influxes of capital and the ability to obtain materials for construction at much less cost. Deep mining activities began in this period and refined smelting operations increased. The increased activity stimulated population growth and the development of labor unions (Notarianni: 1982).

The third period, between 1899 and 1912, was a period of substantial growth. In 1899, Tintic was the leading producer of raw and processed ore in Utah, in the sum of \$5,228,575. The Tintic District produced a total of \$35,000,000 between 1870 through 1899 (Lindgren: 1919).

The final period of prominence was from 1913 to 1926. This period was one of continued cyclical prosperity. Production peaked at \$16,200,000 in 1925. The town of Eureka grew to nearly 4,000 people, with corresponding interests in other towns (Notarianni: 1982).

The coming of the depression brought an end to Tintic's prosperity. Periodic opening and closing of various mines continues today. Remnants of the town and former days of glory still stand as reminders of prosperity.

Bullion Beck and Champion Mine

John Beck was born in the town of Aichelberg in Wurttemberg, Germany, on March 19, 1843. He joined the Mormon church in 1862, serving as a missionary to Switzerland and Germany before immigrating to Utah in 1864 (Powell: 1984). Beck moved from Richfield to Lehi, Utah, engaging in farming, sheep herding, woodcutting and charcoal making. He became somewhat prosperous and invested \$6,000 in the Eureka Hill Mine in 1870. Beck's business acumen had not yet developed, as he lost both his money and claims to the mine through litigation (Powell 1984). Beck quickly earned the nickname "Crazy Dutchman" when he staked a claim in the gulch below Eureka Hill (Notarianni: 1982). His belief that the ores would migrate downward proved to be correct, and the mine began paying back his meager investment in rapid fashion.

Beck became a prominent entrepreneur in Utah and diversified his capital between his mining interest and also founded the hot springs resorts of Saratoga near Lehi and Beck's hot springs just north of Salt Lake City. Beck, a faithful Mormon with five wives, encouraged immigration of his fellow Germans to Utah. The number of German heads of household in Eureka increased from two in 1880 to sixty-five in 1990. Beck also established, at his own expense, the first Latter-Day Saints church buildings in Eureka (Powell: 1984).

The Bullion Beck and Champion Mining Company developed in an orderly fashion until 1890 when a major expansion occurred. The Salt Lake Tribune used its New Year's Day issue to review important developments in Utah during the past year. The January 1, 1891, issue reviewed the important changes at the mine in 1890. The Tribune reported that:

Over the shaft is the main building of the hoisting works. This is a substantially framed structure 40 by 119 feet and high enough to take in the gallows frame, that being one of the best and strongest in the country and sixty feet in height [sic]. There are no better framed timbers or larger one [sic] than these in Utah.

The central support timbers for the headframe or gallows actually measure 1 foot 4-1/2 inch by 2 feet 1 inch. The four outer posts are roughly 1 foot 5 inches by 1 foot 11 inches and are embedded in concrete pads. The Tribune goes on to report that at the other end of the building are a "Frazer and Chalmers pair of engines of 500 horsepower each." The engines were joined on one shaft and coupled by an elaborate series of clutches and brakes that allowed the engines to operate the cable reels either separately or together. There are also indices to show the positions of the cages. The cages were supported by "wide, flat steel ropes." The cages entered a double compartment shaft with a "manway" (walkway) from top to bottom.

There were other developments at the Bullion Beck and Champion Mine (commonly called the Bullion Beck) in 1890 that were similarly impressive. The Tribune reported the site also contained a 40-by-40-foot boiler house with two batteries of two boilers each. The furnaces that drove the boilers had two 80-foot stacks. Other structures included a wood shop, blacksmith shop, coal house and a 500-ton ore bin. Other facilities included a 75-light dynamo and a 100-horsepower Rand compressor with new drills. The Tribune estimated that the mine had sent out 25,000 tons of ore in 1890. The capacity of the new facility would be 100 tons per day (Tribune: 1891). The mine was employing 275 men at this time.

The mine site was also expanded in 1890. The former site was 4,000 by 600 feet. New property, 5,400 by 1,500 feet, was added on the east side. The Bullion Beck and Champion Mine also acquired the Homansville Spring and a new water service with two storage tanks and new pipes. The Tribune noted that the cost of the site modification was \$80,000, the additional property another \$50,000, and the water works another \$90,000. The Tribune proudly noted that the Bullion Beck and Champion Mine still paid dividends of \$325,000 that year.

The final major expansion at the Bullion Beck and Champion Mine occurred in 1894, when a new mill was added. The mill covered an area 220 feet by 125 feet, with a tower that rose nearly 105 feet in the air. The water system was also expanded at this time (Notarianni: 1982). Figure 1 is a photograph of the completed operation about 1895.

The Bullion Beck and Champion Mine, along with the many other mines in the Tintic Mining District, went through cyclical prosperity, labor strikes, and other events common to the day. By 1917, the Bullion Beck and Champion Mine had begun to lease parts of the interior of the mine. Prosperity began to dwindle soon afterward and the facilities at the Bullion Beck and Champion Mine, with the sole exception of the headframe, were demolished in 1925 (Notarianni: 1982).

While the days of prosperity would never be repeated, the Bullion Beck and Champion Mine was brought to life again during World War II. At the beginning of the war (around 1940), Duke Page and his partner, Brennan Hannifin, first reopened Eureka Hill Mine, which is slightly north and east of Bullion Beck and Champion Mine. Tests conducted by Page and Hannifin led them to move their operation down the hill to Bullion Beck and Champion Mine. The headframe was reused but not enclosed, although a hoist room was constructed to house the fifty-horsepower electric motor that powered the hoist (Hannifin: 1986).

The new era of Bullion Beck and Champion Mine saw ore mined for a different purpose. Bullion Beck and Champion ore has a high silica content which is valuable as flux in the processing of copper. American Smelting and Refining Company (ASARCO) in Salt Lake City, and International Refining in Tooele, were

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two leading producers of copper during the war, and Page and Hannifin were one of their major ore suppliers. Utah produced one-third of the copper used by the United States and its allies in World War II (Arrington: 1966). In addition to the use of the ore for flux, secondary recovery of gold and silver produced additional income for both the ore producer and the manufacturer (Hannifin: 1986).

Prosperity continued through the 40s and into the 50s, stimulated by the Korean War. The Yankee and Mammoth mines were reopened, and the Chief Consolidated Mine continued to employ almost 100 people. The Bullion Beck and Champion Mine was run as a father and son operation in the 50s by Brennan Hannifin, one of the original partners, and his son, Tim (Hannifin: 1986).

In 1957, Kennecott Copper acquired ASARCO and, shortly thereafter, International Refining shut down. Kennecott used a new flux process in their copper manufacture that did not use the Tintic District's ores. The move proved disastrous for Tintic's economy. The Chief Consolidated Mine closed in 1957. The Bullion Beck and Champion Mine kept running by sending their ore to California, but high shipping charges and low ore prices made continued mining economically unfeasible. The Bullion Beck and Champion Mine was closed in June or July of 1960 (Hannifin: 1986).

The Tintic Mining District was nominated for and placed on the National Register of Historic Places in 1976. The idle headframes of the Big Four mines, as the Eureka Hill, the Bullion Beck and Champion, the Gemini and the Centennial-Eureka are called, stand out in the landscape of the Tintic District. They are an important visual contribution to the rich mining history of the district.

Present-day use of the Bullion Beck and Champion mining properties now includes grazing, historic and mining interests. United States Smelting, Refining and Mining Company (USSRMCO) first acquired an interest in the Bullion Beck and Champion Mine in 1917. In 1979, Sharon Steel acquired the assets of USSRMCO under the name of U.V. Industries. On February 15, 1983, Sharon Steel entered into a land-use license for two of the Bullion Beck and Champion's patented mining claims with the Tintic Historical Society. The surface of these claims contains the mine's headframe. The society maintains use of the site for locating a historical marker and a small parking area. On August 1, 1985, Sharon Steel leased all of its mining claims and mill sites in the Tintic District to Diamond Bullion Corporation for future mining possibilities (Sadler: 1986).

Also in August of 1985, the State of Utah embarked upon an abandoned mine reclamation project in the Tintic District. The project was aimed at eliminating the worst hazards of open and caving mine shafts which were closest to the town and roads. Most of the shafts were backfilled as the preferred

method of eliminating the shaft and stabilizing the collars. Several shafts were scheduled to receive the specially-designed grid due to the lack of fill, the need to leave the shaft venting, or for historical considerations.

Between 1980 and 1985, the cage-dumping platform on the Bullion Beck and Champion Mine headframe deteriorated considerably. In designing the shaft closure for the headframe, the state determined that in order to place the grid over the shaft, the broken and listing platform would need to be temporarily moved. The platform was to be placed on the ground next to the headframe and rehung, if possible, or laid on top of the grid after installation. In placing the grid, an unfortunate series of events occurred on March 18, 1986. The skip guides of the headframe were broken and the platform destroyed. Since this adverse effect on the headframe occurred, the state, in consultation with Federal agencies, the Certified Local Government of Eureka and the Tintic Historical Society, has worked cooperatively to devise a satisfactory mitigation plan for the damage to the headframe. The mitigation consists of four parts:

1. Shaft Collar Stabilization - This work consists of reconstruction of the shaft collar and rebuilding the wooden shaft lining to a viewable depth. Although this work cannot guarantee continued stability of the headframe, it is of importance to the shaft collar stability.
2. Skip Guide Stabilization - Three vertical beams, which were severed in the accident, were spliced with compatible timber to continue them to the ground level and were secured to the headframe.
3. HAER Documentation - This report, along with photographs and drawings, constitutes the HAER documentation.
4. Public Interpretation of the Headframe Workings - The Utah State Historic Preservation Office (SHPO) believed that the greatest disadvantage of the headframe damage was the inability of the observer to understand the purpose, importance and use of the headframe in the context of the mining operation. To offset the loss of information, an interpretive plaque was developed, in conjunction with the Tintic District and SHPO, and installed on the site. A new monument was constructed to house the new plaque and the Utah historic marker plaque which existed at the site. An accompanying pamphlet to the Tintic Tour Guide was developed on the Bullion Beck and Champion Mine by Dr. Phillip F. Notarianni. The pamphlet drew upon the HAER documentation and was printed by the Division of Oil, Gas and Mining, Utah Department of Natural Resources.

PART II. BIBLIOGRAPHY

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DESCRIPTION OF FEATURE

THE BULLION BECK AND CHAMPION MINE HEADFRAME Tintic Mining District Eureka, Utah

General Information

I. Sources

The material used in the feature descriptions was taken from the following data sources:

1. Notes and dimensions taken by Allen D. Roberts during on-site investigation conducted August 11, 1986.
2. Photographs taken by John A. Senulis during on-site investigation August 11, 1986.
3. Site descriptions and information prepared by Utah Department of NATurAl Resources, Division of Oil, Gas and Mining.
4. Sheets of measured architectural features prepared by Allen D. Roberts during the month of August 1986.

II. Format

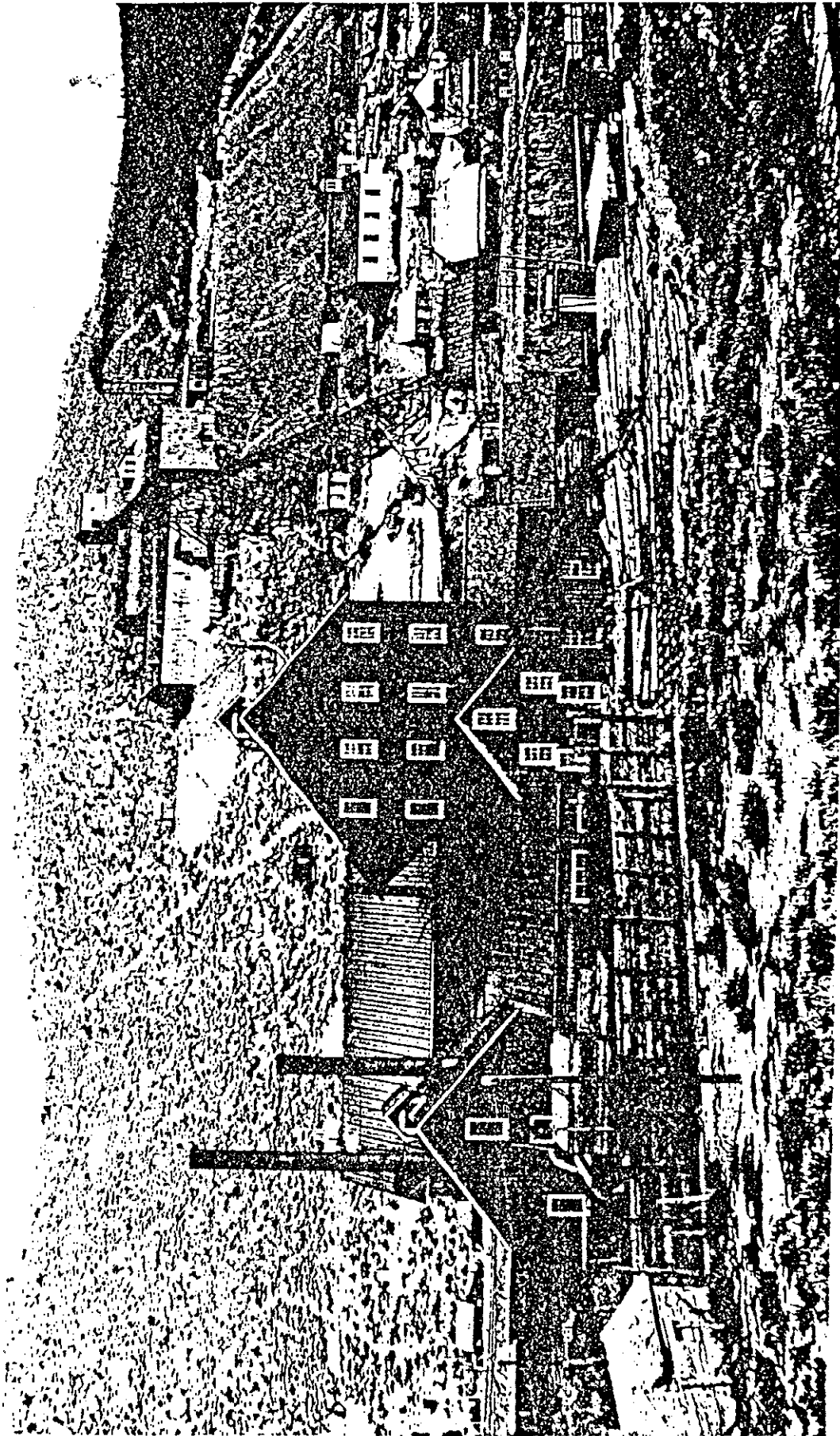
The feature has been described using a four step process as follows:

- A. Probable use (or name)
- B. Construction materials
- C. Dimensions
- D. Additional information

Feature Description

I. Feature

- A. Bullion Beck and Champion Mine headframe (gallows). Support for lowering mine cars into the mine shaft.
- B. Timber framed with metal bolts, concrete support pads.
- C. The headframe, 67 feet long by 32 feet wide by 56 feet high (estimate).
- D. Headframe was constructed in 1890. Surrounding frame structure demolished in 1925.



BULLION BECK & CHAMPION MINE AND MILL, PARKER.

Figure 1. Source: 1896 Industrial Arts of Utah
(Print in the Utah Historical Society Collection)

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